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12 ALPHA & OMEGA SEMICONDUCTOR, INC.  
13 ALPHA & OMEGA SEMICONDUCTOR, LTD.

14 UNITED STATES DISTRICT COURT  
15 NORTHERN DISTRICT OF CALIFORNIA  
16 SAN FRANCISCO DIVISION

18 ALPHA & OMEGA SEMICONDUCTOR,  
19 INC., a California corporation; and  
20 ALPHA & OMEGA SEMICONDUCTOR,  
21 LTD., a Bermuda corporation,

21 Plaintiffs,

22 v.

23 FAIRCHILD SEMICONDUCTOR  
24 CORP., a Delaware corporation,

24 Defendant.

25 AND RELATED COUNTERCLAIMS  
26

Case No. C 07-2638 JSW  
(Consolidated with Case No. C 07-2664 JSW)

**ALPHA & OMEGA SEMICONDUCTOR,  
INC.'S AND ALPHA & OMEGA  
SEMICONDUCTOR, LTD.'S REPLY AND  
AFFIRMATIVE DEFENSES TO  
FAIRCHILD'S SECOND AMENDED  
COUNTERCLAIMS**

**DEMAND FOR JURY TRIAL**

Alpha & Omega Semiconductor, Inc. (“AOS, Inc.”) and Alpha & Omega Semiconductor, Ltd. (“AOS, Ltd.”) (collectively, “AOS”) respond to Fairchild Semiconductor Corp.’s (“Fairchild”) first amended counterclaims as follows:

### **JURISDICTION AND VENUE**

1. AOS denies that it has infringed or now infringes the patents asserted against AOS in Fairchild’s counterclaims. AOS admits, without admitting the validity of Fairchild’s patent infringement claims, that Fairchild’s counterclaims purport to state causes of action under the patent laws of the United States. AOS admits that this Court has subject matter jurisdiction over these purported claims under 28 U.S.C. §§ 1331, 1338(a), 2201 and 2202.

2. AOS admits, for the purpose of this action only, that venue is proper in this judicial district.

3. AOS admits, for the purpose of this action only, that this Court has personal jurisdiction.

### **PARTIES**

4. AOS lacks sufficient knowledge or information to admit or deny the allegations in paragraph 4.

5. AOS admits that AOS, Inc. is a corporation duly incorporated under the laws of the State of California with its principal place of business in Sunnyvale, California. AOS admits that AOS, Ltd. is a Bermuda corporation.

### **FIRST COUNTERCLAIM**

#### **(Declaratory Judgment of Non-Infringement)**

6. AOS realleges and incorporates by reference the responses stated in paragraphs 1-5 above.

7. AOS admits that it is the owner by assignment of U.S. Patent Numbers 5,907,776 (the “‘776 patent”), 5,767,567 (the “‘567 patent”), and 5,930,630 (the “‘630 patent”).

8. AOS admits that an actual and justiciable case or controversy exists between Fairchild on the one hand and AOS on the other. AOS admits that it has sued Fairchild alleging infringement of the ‘776, ‘567, and ‘630 patents.

1 9. AOS denies each and every allegation contained in paragraph 9.

2 10. AOS admits that Fairchild purports to seek a judicial determination from this  
3 Court, but AOS denies that there is any basis for such a determination.

4 **SECOND COUNTERCLAIM**

5 **(Declaratory Judgment of Invalidity)**

6 11. AOS realleges and incorporates by reference the responses stated in paragraphs 1-  
7 9 above.

8 12. AOS admits that an actual and justiciable case or controversy exists between  
9 Fairchild on the one hand and AOS on the other. AOS admits that it has sued Fairchild alleging  
10 infringement of the '776, '567, and '630 patents.

11 13. AOS denies each and every allegation contained in paragraph 13.

12 14. AOS admits that Fairchild purports to seek a judicial determination from this  
13 Court, but AOS denies that there is any basis for such a determination.

14 **THIRD COUNTERCLAIM**

15 **(Infringement of United States Patent No. 6,429,481)**

16 15. AOS realleges and incorporates by reference the responses stated in paragraphs 1-  
17 5 above.

18 16. AOS admits that the title page of United States Patent No. 6,429,481 (the "'481  
19 patent") states on its face that the patent was issued on August 6, 2002. AOS admits that on its  
20 face, the '481 patent is entitled "Field Effect Transistor and Method of Its Manufacture." AOS  
21 admits that on its face the '481 patent lists "Fairchild Semiconductor Corporation" as its assignee.  
22 AOS admits that a copy of the '481 patent is attached to Fairchild's amended counterclaims as  
23 Exhibit A. AOS denies that the '481 was duly and legally issued. AOS lacks sufficient  
24 knowledge or information to admit or deny that Fairchild continues to hold all rights and interest  
25 in the '481 patent. AOS denies any and all remaining allegations of paragraph 16 of Fairchild's  
26 amended counterclaims.

27 17. AOS denies that it has been or currently is directly or indirectly infringing or  
28 actively inducing or contributing to the infringement of the '481 patent. AOS denies each and

every allegation contained in paragraph 17.

18. AOS denies each and every allegation contained in paragraph 18.

19. AOS denies each and every allegation contained in paragraph 19.

#### **FOURTH COUNTERCLAIM**

##### **(Infringement of United States Patent No. 6,710,406)**

20. AOS realleges and incorporates by reference the responses stated in paragraphs 1-5 above.

21. AOS admits that the title page of United States Patent No. 6,710,406 (the “‘406 patent”) states on its face that the patent was issued on March 23, 2004. AOS admits that on its face, the ‘406 patent is entitled “Field Effect Transistor and Method of Its Manufacture.” AOS admits that on its face the ‘406 patent lists “Fairchild Semiconductor Corporation” as its assignee. AOS admits that a copy of the ‘406 patent is attached to Fairchild’s amended counterclaims as Exhibit B. AOS denies that the ‘406 was duly and legally issued. AOS lacks sufficient knowledge or information to admit or deny that Fairchild continues to hold all rights and interest in the ‘406 patent. AOS denies any and all remaining allegations of paragraph 21 of Fairchild’s amended counterclaims.

22. AOS denies that it has been or currently is directly or indirectly infringing or actively inducing or contributing to the infringement of the ‘406 patent. AOS denies each and every allegation contained in paragraph 22.

23. AOS denies each and every allegation contained in paragraph 23.

24. AOS denies each and every allegation contained in paragraph 24.

#### **FIFTH COUNTERCLAIM**

##### **(Infringement of United States Patent No. 6,521,497)**

25. AOS realleges and incorporates by reference the answers stated in paragraphs 1-5 above.

26. AOS admits that the title page of United States Patent No. 6,521,497 (the “‘497 patent”) states on its face that the patent was issued on February 18, 2003. AOS admits that on its face, the ‘497 patent is entitled “Method of Manufacturing a Field Effect Transistor.” AOS

1 admits that on its face the '497 patent lists "Fairchild Semiconductor Corporation" as its assignee.  
 2 AOS admits that a copy of the '497 patent is attached to Fairchild's amended counterclaims as  
 3 Exhibit C. AOS denies that the '497 was duly and legally issued. AOS lacks sufficient  
 4 knowledge or information to admit or deny that Fairchild continues to hold all rights and interest  
 5 in the '497 patent. AOS denies any and all remaining allegations of paragraph 26 of Fairchild's  
 6 amended counterclaims.

7 27. AOS denies that it has been or currently is directly or indirectly infringing or  
 8 actively inducing or contributing to the infringement of the '497 patent. AOS denies each and  
 9 every allegation contained in paragraph 27.

10 28. AOS denies each and every allegation contained in paragraph 28.

11 29. AOS denies each and every allegation contained in paragraph 29.

### 12 **SIXTH COUNTERCLAIM**

#### 13 **(Infringement of United States Patent No. 6,828,195)**

14 30. AOS realleges and incorporates by reference the answers stated in paragraphs 1-5  
 15 above.

16 31. AOS admits that the title page of United States Patent No. 6,828,195 (the "'195  
 17 patent") states on its face that the patent was issued on December 7, 2004. AOS admits that on its  
 18 face, the '195 patent is entitled "Method of Manufacturing a Trench Transistor Having a Heavy  
 19 Body Region." AOS admits that on its face the '195 patent lists "Fairchild Semiconductor  
 20 Corporation" as its assignee. AOS admits that a copy of the '195 patent is attached to Fairchild's  
 21 amended counterclaims as Exhibit D. AOS denies that the '195 was duly and legally issued.  
 22 AOS lacks sufficient knowledge or information to admit or deny that Fairchild continues to hold  
 23 all rights and interest in the '195 patent. AOS denies any and all remaining allegations of  
 24 paragraph 31 of Fairchild's amended counterclaims.

25 32. AOS denies that it has been or currently is directly or indirectly infringing or  
 26 actively inducing or contributing to the infringement of the '195 patent. AOS denies each and  
 27 every allegation contained in paragraph 32.

28 33. AOS denies each and every allegation contained in paragraph 33.

34. AOS denies each and every allegation contained in paragraph 34.

**SEVENTH COUNTERCLAIM**

**(Infringement of United States Patent No. 7,148,111)**

35. AOS realleges and incorporates by reference the answers stated in paragraphs 1-5 above.

36. AOS admits that the title page of United States Patent No. 7,148,111 (the “‘111 patent”) states on its face that the patent was issued on December 12, 2006. AOS admits that on its face, the ‘111 patent is entitled “Method of Manufacturing a Trench Transistor Having a Heavy Body Region.” AOS admits that on its face the ‘111 patent lists “Fairchild Semiconductor Corporation” as its assignee. AOS admits that a copy of the ‘111 patent is attached to Fairchild’s amended counterclaims as Exhibit E. AOS denies that the ‘111 was duly and legally issued. AOS lacks sufficient knowledge or information to admit or deny that Fairchild continues to hold all rights and interest in the ‘111 patent. AOS denies any and all remaining allegations of paragraph 36 of Fairchild’s amended counterclaims.

37. AOS denies that it has been or currently is directly or indirectly infringing or actively inducing or contributing to the infringement of the ‘111 patent. AOS denies each and every allegation contained in paragraph 37.

38. AOS denies each and every allegation contained in paragraph 38.

39. AOS denies each and every allegation contained in paragraph 39.

**EIGHTH COUNTERCLAIM**

**(Infringement of United States Patent No. 6,818,947)**

40. AOS realleges and incorporates by reference the answers stated in paragraphs 1-5 above.

41. AOS admits that the title page of United States Patent No. 6,818,947 (the “‘947 patent”) states on its face that the patent was issued on November 16, 2004. AOS denies that the ‘947 patent is entitled “Buried State-Field Termination Structure,” but AOS admits that on its face, the ‘947 patent is entitled “Buried Gate-Field Termination Structure.” AOS admits that on its face the ‘947 patent lists “Fairchild Semiconductor Corporation” as its assignee. AOS admits

1 that a copy of the '947 patent is attached to Fairchild's amended counterclaims as Exhibit F.  
 2 AOS denies that the '947 was duly and legally issued. AOS lacks sufficient knowledge or  
 3 information to admit or deny that Fairchild continues to hold all rights and interest in the '947  
 4 patent. AOS denies any and all remaining allegations of paragraph 41 of Fairchild's amended  
 5 counterclaims.

6 42. AOS denies that it has been or currently is directly or indirectly infringing or  
 7 actively inducing or contributing to the infringement of the '947 patent. AOS denies each and  
 8 every allegation contained in paragraph 42.

9 43. AOS denies each and every allegation contained in paragraph 43.

10 44. AOS denies each and every allegation contained in paragraph 44.

### 11 **NINTH COUNTERCLAIM**

#### 12 **(Declaratory Judgment of Unenforceability of United States Patent No. 5,907,776 due to** 13 **Inequitable Conduct)**

14 45. AOS realleges and incorporates by reference the answers stated in paragraphs 1-5  
 15 above.

16 46. AOS admits that an actual and justiciable case or controversy exists between  
 17 Fairchild on the one hand and AOS on the other. AOS admits that it has sued Fairchild alleging  
 18 infringement of the '776 patent.

19 47. AOS denies each and every allegation contained in paragraph 47.

20 48. AOS admits that Fairchild purports to seek a judicial determination from this  
 21 Court, but AOS denies that there is any basis for such a determination.

### 22 **AFFIRMATIVE AND OTHER DEFENSES**

23 Further responding to Fairchild's amended counterclaims, AOS asserts the following  
 24 defenses. AOS reserves the right to amend its response with additional defenses as further  
 25 information is obtained.

### 26 **FIRST DEFENSE**

#### 27 **(Failure to State a Claim)**

28 49. Fairchild's counterclaims fail to state a claim against AOS upon which relief may

1 be granted.

2 **SECOND DEFENSE**

3 **(Non-infringement of the Asserted Patents)**

4 50. AOS has not infringed, contributed to the infringement of, or induced the  
5 infringement of any valid claim of the '481, '406, '497, '195, '111, or '947 patents, and is not  
6 liable for infringement thereof.

7 51. Any and all products AOS makes that are accused of infringement in this action  
8 have substantial uses that do not infringe and therefore cannot induce or contribute to the  
9 infringement of the '481, '406, '497, '195, '111, or '947 patents.

10 52. No product AOS makes, uses, offers to sell, or imports into the United States or  
11 process AOS uses to make AOS's products infringes the '481, '406, '497, '195, '111, or '947  
12 patents.

13 **THIRD DEFENSE**

14 **(Invalidity of the Asserted Patents)**

15 53. AOS believes that, after a reasonable opportunity for further investigation or  
16 discovery, it will be able to demonstrate that one or more claims of the '481, '406, '497, '195,  
17 '111, and '947 patents are invalid for failing to comply with the provisions of the Patent Laws of  
18 the United States, including without limitation 35 U.S.C. §§ 102, 103, 112.

19 **FOURTH DEFENSE**

20 **(Failure to Mark)**

21 54. AOS believes that, after a reasonable opportunity for further investigation or  
22 discovery, it will be able to demonstrate that any claims for damages for alleged infringement are  
23 barred or limited due to failure to allege compliance with (and failure to comply with) the  
24 requirements of 35 U.S.C. § 287.

25 **FIFTH DEFENSE**

26 **(Unavailability of Relief)**

27 55. AOS believes that, after a reasonable opportunity for further investigation or  
28 discovery, it will be able to demonstrate that Fairchild has failed to plead and meet the



1 requirements of 35 U.S.C. § 271(b) and (c) and that Fairchild is not entitled to any alleged  
 2 damages prior to providing any actual notice to AOS of its claim of infringement of the '481,  
 3 '406, '497, '195, '111, and/or '947 patents.

#### 4 **SIXTH DEFENSE**

##### 5 **(Unavailability of Enhanced Damages)**

6 56. AOS believes that, after a reasonable opportunity for further investigation or  
 7 discovery, it will be able to demonstrate that Fairchild has failed to plead and meet the  
 8 requirements of 35 U.S.C. § 284 for enhanced damages and is not entitled to any damages prior to  
 9 providing any actual notice to AOS of the '481, '406, '497, '195, '111, and/or '947 patents.

#### 10 **SEVENTH DEFENSE**

##### 11 **(Prosecution History Estoppel)**

12 57. To the extent that Fairchild attempts to assert infringement under the doctrine of  
 13 equivalents, AOS believes that, after a reasonable opportunity for further investigation or  
 14 discovery, it will be able to demonstrate that arguments and amendments contained in the  
 15 prosecution history will estop or bar any claims for alleged infringement.

#### 16 **EIGHTH DEFENSE**

##### 17 **(Laches/Prosecution Laches/Estoppel)**

18 58. AOS believes that, after a reasonable opportunity for further investigation or  
 19 discovery, it will be able to demonstrate that any claims for alleged infringement are barred or  
 20 limited by the doctrine of laches, prosecution laches, and/or equitable estoppel.

#### 21 **NINTH DEFENSE**

##### 22 **(Adequate Remedy At Law)**

23 59. AOS believes that, after a reasonable opportunity for further investigation or  
 24 discovery, it will be able to demonstrate that any claims for injunctive relief are barred in light of  
 25 the fact that Fairchild has an adequate remedy at law.

#### 26 **TENTH DEFENSE**

##### 27 **(Res Judicata / Collateral Estoppel)**

28 60. Fairchild's amended counterclaims alleging infringement of the '481, '406, '497,

1 and '195 patents are barred because of the doctrines of res judicata and collateral estoppel.

2 **PRAYER FOR RELIEF**

3 WHEREFORE, AOS prays for the entry of judgment as follows:

4 A. Dismissing with prejudice any and all of Fairchild's counterclaims and ordering  
5 that Fairchild take nothing as a result;

6 B. Awarding AOS its reasonable attorneys' fees, expenses and costs incurred in this  
7 action;

8 C. Granting AOS such other action and further relief as this Court may deem just and  
9 proper, or that AOS may be entitled to as a matter of law or equity.

10  
11 Dated: November 7, 2007

MORGAN, LEWIS & BOCKIUS LLP

12  
13 By /s/ Daniel Johnson, Jr.

14 Daniel Johnson, Jr.  
15 Attorneys Plaintiffs and Counterdefendants  
16 ALPHA & OMEGA SEMICONDUCTOR,  
17 LTD., AND ALPHA & OMEGA  
18 SEMICONDUCTOR, INC.

19 **DEMAND FOR JURY TRIAL**

20 AOS hereby requests a trial by jury.

21 Dated: November 7, 2007

MORGAN, LEWIS & BOCKIUS LLP

22  
23 By /s/ Daniel Johnson, Jr.

24 Daniel Johnson, Jr.  
25 Attorneys for Plaintiffs and Counterdefendants  
26 ALPHA & OMEGA SEMICONDUCTOR,  
27 LTD., AND ALPHA & OMEGA  
28 SEMICONDUCTOR, INC.